Urban Flight

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"The Evolution of City Population Density in the United States." Kevin A. Bryan, Brian D. Minton, and Pierre-Daniel G. Sarte. Federal Reserve Bank of Richmond *Economic Quarterly*, Fall 2007, vol. 93, no. 4, pp. 341-360.

People live in cities for many reasons — to be close to their jobs, to culture, and to neighbors, among other motivations. Economists tend to think of these reasons as the positive externalities — or byproducts — of population density. In theory, living close together helps people work together. This in turn improves the productivity of their endeavors. Dense cities have been termed the economic "nucleus of an atom" because of their role in sparking transfers of human capital. One study found that patents per capita rise 20 percent as the employment density of a city doubles. Of course, density also brings negative externalities, such as congestion and higher land prices.

In a new paper, economists with the Richmond Fed lay some groundwork for studying the implications of population density in the early 21st century. With speedy transportation options and hi-tech communication devices, how important is population density to a city's economic growth? The authors build an electronic database containing land area, population, and urban density for every U.S. city with a population greater than 25,000. Such data has been available in the past, but most of it was not in electronic form. Then the authors use the data to estimate the distribution of city densities since 1940.

The results are clear and robust: "There has been a stark decrease in density during the period studied. This deconcentration has been occurring continuously since at least 1940, in every area of the United States, and among both new and old cities." Since 1940, density in legal cities with populations over 25,000 has fallen from 6,742 people per square mile to 3,802, in large part because of increases in city size (mostly through annexation). The leading theories for why people live farther apart include decreased transportation costs, thanks to the automobile, and a desire among some people to live in more homogenized environments, with lower tax rates and better schools.

The authors also believe that improved communication technologies allow people to live farther apart without giving up the positive externalities normally gained through population density. "Falling urban densities suggest that, over the past seven decades, the productivity benefits of dense cities have been weakening," they conclude.

The authors have made their data and replication files available to the public at http://www.richmondfed.org/research/research_economists/pierre-daniel_sarte.cfm.

"The Reaction of Consumer Spending and Debt to Tax Rebates: Evidence from Consumer Credit Data." Sumit Agarwal, Chunlin Liu, and Nicholas S. Souleles. Federal Reserve Bank of Philadelphia Working Paper 07-34, November 2007.

Between July and September 2001, the U.S. government disbursed $38 billion in tax rebates to working Americans. The average amount was $500 per household. Using a new panel dataset of credit card accounts, the authors examine how consumers respond to what they term "lumpy" boosts to their income.

The records indicate that consumers used their rebates to pay down credit card balances, but then quickly ratcheted up their spending. This runs counter to basic economic intuition; if the rebates were anticipated, consumers should not have significantly changed their spending habits at the time they collected their checks. On the other hand, the evidence suggests that the rebates had precisely the effect on consumption that politicians hoped for.

The authors conclude: "Because these results relied exclusively on exogenous, randomized variation, they represent compelling evidence of a causal link from the rebate to spending."

"Hedge Funds, Financial Intermediation, and Systemic Risk." John Kambhu, Til Schuermann, and Kevin J. Stiroh. Federal Reserve Bank of New York *Economic Policy Review*, December 2007, vol. 13, no. 3, pp. 1-18.

As they've grown larger, hedge funds have come under scrutiny for their potential to disrupt the economy. Economists with the New York Fed explain why hedge funds exacerbate market failures that make traditional methods to reduce credit exposures less effective.

They begin with a concise definition for hedge funds as "largely unregulated, private pools of capital." Because they are open only to accredited investors and large institutions, they aren't subject to much regulation and hedge fund managers enjoy great latitude in their choice of investment strategies.

Recent improvements in counterparty credit risk management — specifically, the use of collateral to provide a buffer against increased exposure — as well as the ever-present force of market discipline remain the most appropriate checks on hedge funds, the authors conclude. "While various market failures may make [counterparty credit risk management] imperfect, it remains the best line of defense against systemic risk," they write. **RF**